

University of Groningen

Encouraging employees to cooperate

Lambooij, Mattijs; Flache, Andreas; Sanders, Karin; Siegers, Jacques

Published in:
International Journal of Human Resource Management

DOI:
[10.1080/09585190701570932](https://doi.org/10.1080/09585190701570932)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2007

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Lambooij, M., Flache, A., Sanders, K., & Siegers, J. (2007). Encouraging employees to cooperate: The effects of sponsored training and promotion practices on employees' willingness to work overtime. *International Journal of Human Resource Management*, 18(10), 1748-1767.
<https://doi.org/10.1080/09585190701570932>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

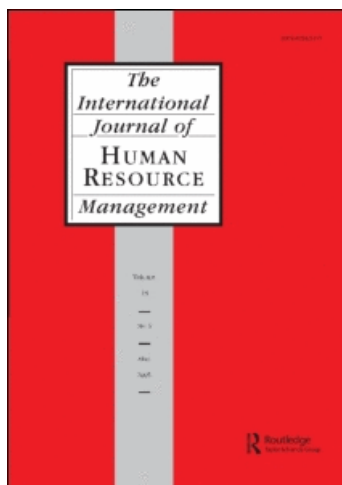
This article was downloaded by: [University of Groningen]

On: 6 November 2009

Access details: Access Details: [subscription number 907173570]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



The International Journal of Human Resource Management

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713702518>

Encouraging employees to co-operate: the effects of sponsored training and promotion practices on employees' willingness to work overtime

Mattijs Lambooi; Andreas Flache; Karin Sanders; Jacques Siegers

Online Publication Date: 01 October 2007

To cite this Article Lambooi, Mattijs, Flache, Andreas, Sanders, Karin and Siegers, Jacques(2007)'Encouraging employees to co-operate: the effects of sponsored training and promotion practices on employees' willingness to work overtime',The International Journal of Human Resource Management,18:10,1748 — 1767

To link to this Article: DOI: 10.1080/09585190701570932

URL: <http://dx.doi.org/10.1080/09585190701570932>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Encouraging employees to co-operate: the effects of sponsored training and promotion practices on employees' willingness to work overtime

*Mattijs Lambooi, Andreas Flache, Karin Sanders
and Jacques Siegers*

Abstract The 'mutual-investment' model argues that when employers invest more in the social exchange relationship between them and their employees, their employees will show more effort. In this paper we relate the 'mutual-investment' model to training and promotion (possibilities) and examine if these kinds of career-enhancing measures influence the willingness of employees within organizations to work overtime. To test this hypothesis, a vignette experiment was conducted in five organizations (N = 388; 1,531 vignettes). Multilevel analyses show that employees are more willing to work overtime when their employer has provided for training, when the employee recently was promoted, when the supervisor was supportive in the past and when co-workers approve of working overtime and behave similarly. But we did not find that future promotion chances affect willingness to work overtime.

Keywords Promotion chances; social exchange; training of employees; vignette experiment; working overtime.

Introduction

Employees' cooperative behaviours in labour organizations are considered behaviours that are conducted by employees while aligning their interests with those of the employer and other employees (Koster and Sanders, 2006; Sanders and Van Emmerik, 2004; Sanders *et al.*, 2002). Co-operative behaviours consist of an array of behaviours that are beneficial to the employer or co-workers. Examples are to work together with colleagues within a team, share knowledge, work overtime, and submit information needed to keep the organization running (Koster, 2005; Sanders *et al.*, 2004; Wickens, 1995). These

Mattijs Lambooi, ICS, Utrecht University, PO Box 80140, 3508 TC, Utrecht, the Netherlands (e-mail: mattijs.lambooi@rivm.nl); Andreas Flache, Associate Professor, ICS, University of Groningen, Grote Rozenstraat 31, 9712 TG Groningen, The Netherlands (tel: 0031-50-3636214; fax: 0031-50-3636226; e-mail: a.flache@rug.nl); Karin Sanders, Professor of Work and Organizational Psychology, University of Twente, PO Box 217, 7500 AE Enschede, the Netherlands (tel: 0031-53-489 4204; fax: 0031-53-489 3791; e-mail: k.sanders@utwente.nl); Jacques Siegers, Professor of Economics at Utrecht University, USE and ICS- Utrecht University; Janskerkh of 12, 3512 BL Utrecht; the Netherlands (tel: 0031-30-253-9800; fax: 0031-30-253 7373; e-mail: j.j.siegers@econ.uu.nl).

behaviours may be costly for the employee in the short-term, because all these actions take time. Depending on the situation and on the type of co-operation, helping may affect the employee's core tasks, which have to be fulfilled afterwards or may even take away leisure time of the employee. The employee, therefore, has an incentive to refrain from cooperation and stick to its formally assigned tasks. However, co-workers may benefit from these behaviours because it enables them to do a better job in a more pleasant environment and the employer may benefit because her workforce may become more productive.

The relationship between employer and employee is more than a strictly financial-economic one because, added to the exchange of time for money, there exists a social exchange relationship that is affected by several factors within the labour organization (Blau, 1964; Homans, 1961). In this view, actors exchange social goods. So when one actor helps another, and the second actor expresses gratitude and/or may tell others about the help received by the first actor, this is considered as an exchange of help for social approval. On the job, we assume co-operative behaviours to be an exchangeable good in the exchange relationships between the employee and employer (being the organization), the employee and supervisor and employee and colleagues. In return, the employee may receive benefits and better career prospects from the employer. These kinds of exchangeable goods lie within the realm of social exchange because they are generally not included in formal labour contracts.

According to the HRM literature, investing in training and promotion are two central rewards that an organization can provide in order to enhance employees' performance (Boselie and Dietz, 2003). Much of the research in the HRM field focuses on outcomes such as satisfaction, commitment and turnover (Boselie and Dietz, 2003). Even though these aspects are important, much of the literature does not pay specific attention to co-operative behaviours of employees towards the organization, which may improve organizational performance. Although it is important to have a satisfied, committed and properly skilled work force, this will only prove its worth when employees co-operate and enable one another to use their skills.

Previous research found similar effects of influences of organizational rewards on employees' behaviours. For instance, Mühlau (2000) found among other things that employees react by being more committed after receiving 'gifts' or extra benefits from their employer. Rynes *et al.* (2004) found that pay affects employee effort. Ito and Brotheridge (2005) found that supervisory career support leads to reduced turnover intention. Prendergast (1999) gives an overview of many types of remunerations and their effects on employees' behaviours. Podsakoff *et al.*, (2000) show in an overview article that rewards and incentives affect employees' organizational citizenship behaviour.

In this paper, we will focus on one particular kind of co-operative behaviour – working overtime. We chose this measurement of co-operation because it is a costly form of cooperation: the employee has to give up spare time in order to be able to co-operate. Therefore, the (short-term) costs only affect the employee and not the employer. If we had studied a different type of co-operation, which would not include giving up spare time, the employee would have had to consider postponing core tasks. However, either colleagues or the supervisor, who directly benefit when the focal employee completes a task because of working overtime, are then enabled to return the co-operation by finishing the postponed tasks for the focal employee. Direct compensation of co-operation may be harder to give when someone has worked overtime. In their spare time, employees can spend time with their loved-ones, spend time on a hobby or do something else that cannot easily be compensated for by any aspect of working life. The research question is formulated as follows: does offering career-enhancing measures, such as training and promotion (possibilities) by employers, encourage employees to work overtime?

Theory and hypotheses

In the 'gift-exchange' model (Akerlof and Yellen, 1988; Tsui *et al.*, 1997) it is argued that employees are willing to exert themselves in exchange for higher wages. Examples of these 'gift-exchange' models are the 'social-exchange' models such as the 'relational-signalling' model (Lindenberg, 2000; Mühlau, 2000). This model states that by giving gifts, the employer signals to expect a long-term labour relationship with the employee. When the employee finds the gift credible enough, he or she will react with more loyalty, goodwill and willingness to work hard. In this paper, we will use a type of 'gift-exchange' model, namely the 'mutual-investment' model by Tsui *et al.* (1997) because it deals with a long-term employment relationship based on more than a strictly formal exchange relationship (see also, Baron and Pfeffer, 1994).

The 'mutual-investment' model is an application of 'social-exchange' theory (Blau, 1964; Homans, 1961) for the employment relationship. Tsui *et al.* (1997) argue that the employer is able to show the employee that he or she cares about the employee's well-being by investing in the employee's career. In turn, the employee may become willing to take on more tasks than formally stated in the contract or where agreed upon beforehand. These extra tasks may consist of helping colleagues and breaking in new colleagues, accepting changing of positions, or accepting employer's requests to work overtime when a deadline has to be met (Lindenberg, 1998, 2000). Generally, it means that the employee considers aligning his or her interests with those of the employer as his or her task. Considering training, the employee is willing to become acquainted with firm-specific knowledge, because the investments are trusted to be compensated for in the long run.

Investment and co-operation

A central element in the mutual-investment model is the assumption that both parties want to maintain a balanced exchange (Adams, 1965). When actors think that they receive less than they give, they will decrease their offerings in order to restore the balance. Vice versa, actors will increase their offerings when the idea arises that they receive too much (Fehr and Kirchsteiger, 1994). The employees may want to restore the balance because they know that the actor who receives too little in the exchange relationship will be inclined to decrease the offerings or terminate the relationship. In case of the employment relationship, this would mean that the employer stops investing in the employee, which in turn will have a negative effect on the employee's chances in the labour market. This would mean that when an employer invests in his or her employees, they may respond with more effort and may take more account of the employer's interests in order to restore the exchange balance. Taking more account of the employer's interests, may result in taking over tasks of colleagues when, due to sickness or pressure, they refrain from doing the task.

In the mutual-investment model (Tsui *et al.*, 1997) it is argued that actors do not only want to reap benefits of their employment relationship, but that they also know they have to balance the benefits and costs for both themselves and their exchange partner, in order to maintain the exchange relationship they are in. Therefore, actors are willing to reciprocate investments of the exchange partner when this upholds a mutual beneficial exchange relationship. So, when employers would like their employees to engage in activities that are positive for the organization, but this cannot be legally enforced, employers may try to expand the exchange relationship beyond the formal obligations by using career-enhancing measures, assuming that employees try to balance the exchange relationship by engaging in positive behaviours for the organization. One of those

options to expand the exchange beyond formal obligations is to invest in the careers of his or her employees.

Employers have several options to invest in their employees; one of them is to offer training. The employer offers time and money, so that the employee may become more productive in the future and may be prepared for higher-ranking positions. In exchange, the employer may ask the employee to forfeit short-term rewards such as bonuses and, for instance, stocks. This construction will have some consequences. Relationally, the employer signals he or she expects a long-term labour relationship. The employer offers trust, hoping it will not be abused. Additionally, the employer increases the chances that trust will not be abused because when the employee decides to let personal interests prevail over the organizational interests, the employer will have legitimate power to sanction the employee by withholding rewards such as promotion or assigning tasks that are more interesting. By these postponed benefits, the employment relationship will become more stable because both for the employer and for the employee it becomes more profitable to continue the labour relationship and they will therefore be more willing to align their interests.

However, the employee could decide to leave the organization after receiving the investment. Then, he or she could reap the benefits of the skills that he or she learned from the training received from the old employer. The exchange relationship would end, and the former employer would have no option anymore to sanction the employees. Nevertheless, there is one problem with that: the former employer could inform the new employer about the untrustworthy behaviour of the employee. The new employer will be reluctant to hire such a person, because the employee may do the same with the new employer. When this happens, the employee might be punished with loss of his or her job and not being able to find a new one. Therefore, leaving after collecting the investment may not be a beneficial option for the employee.

When assumed that the employee will be motivated to balance the exchange relationship in order to maintain the relationship, the employee may respond when the employer offers opportunities (time and/or money) for training. The exchange can be balanced by increasing effort, for instance by showing co-operative behaviours. The following hypothesis can be drawn from the previous discussion:

Hypothesis 1: After the employer has invested in employees, the employees are more willing to work overtime.

Obviously, the primary objective of training is to improve present skills and teach new skills in order to prepare employees for higher positions. New supply for higher positions is important for the continuity of the organization and may be an incentive for employees to improve their performance. When an employer invests in his or her employees by means of training, this gives a signal that the employer considers the employee to be fit for a higher position. Therefore, the employee is not only given money he or she can use for the training, but he or she also receives recognition for shown qualities. Therefore, a promotion is attractive for an employee because of monetary incentives and because of social reasons.

The employer may use the promotion as a selective incentive to reward his or her employees for a good performance and signals to the others that when they perform well, they too will get a reward. It may not even be the objective chance to be promoted, but the fairness of the promotion system, which causes employees to believe they have fair chances to be promoted (Baron and Kreps, 1999a; Stouffer *et al.*, 1949). When employees estimate their chance of promotion to be large enough when performing well, they may be more motivated to work harder than when they assume that their chances are

low. Consistent promotion policies signal that effort will be rewarded with promotions. When employees see that other employees who show co-operative behaviours are rewarded by promotions, they may be more willing to show co-operative behaviours than when they do not see it, or are not able to find consistency in the promotion policies.

Hypothesis 2: When it is customary to reward extra effort with higher promotion chances, employees are more willing to work overtime.

After being promoted, the employee may react in two different ways. The first way is to decrease effort and refrain from co-operative behaviours because the 'prize' is collected. However, according to the social-exchange theory, there are two reasons to expect the employee to maintain or increase his or her effort level. The first reason comes from the same source as why the employee will want to return the investment; the second comes from sanctioning opportunities of the employer.

Because of the promotion to a higher-ranking position, the employee gets access to more privileges and status as well as access to material resources. Therefore, again it is a combination of material and social benefits the employee received from the employer. In order to balance the exchange, the employee may be willing to increase effort and co-operative behaviours and may therefore be more willing to work overtime.

Next to this positive exchange, there exists negative exchange: sanctions. When we assume that the employee wishes to keep the newly acquired position and continue to work for the organization, the employer has means to sanction the employee. In an organization, we find one employer and several employees. Because of this, the employer is less dependent on the employees than vice versa and has therefore more power in the exchange relationship (Willer, 1992). When an employee does not show co-operative behaviours, the employer can withhold the reward and give the reward to an employee who does show co-operative behaviours. Then the employee's chances of more education and promotions will decrease. The employee realizes this and will, therefore, make sure that after being promoted, he or she will maintain or increase co-operative behaviours.

Hypothesis 3: When employees have been promoted recently, they are more willing to work overtime.

Different employees will value the investment differently. For employees with less education, the relative value of the investment is larger than for higher-educated employees. The relative increase of human capital for lower-educated employees is higher than for higher-educated employees, causing their chances on the internal and external labour market to increase relatively more than those of higher-educated employees.¹ Therefore, lower-educated employees may appreciate the value of the investment more and may, therefore, be more induced to show co-operative behaviours than higher-educated employees.

Hypothesis 4: The positive effect of investments on willingness to work overtime will be stronger for lower-educated employees than for higher-educated employees.

Relational exchange relationships and temporal embeddedness

Willingness to work overtime will not only be affected by the exchange relationship between the employee and the organization (institutional exchange relationship), but also by personal exchange relationships (with colleagues and the supervisor), and the temporal

embeddedness (Axelrod, 1984; Koster *et al.*, 2003; Raub and Weesie, 2000) of the exchange relationship: how was the employee treated in the past and what will future rewards be?

The first personal exchange relationship that will affect the institutional exchange relationship is the one of the employee and the supervisor. The supervisor of the employees represents the employer. The supervisor may choose to strictly enforce the employer's policies and rules, or be a bit more creative; the supervisor can focus more on the people or on the tasks. Therefore, within the formal guidelines in the organization, the employee and supervisor have some room to shape their exchange relationship. The supervisor may choose to support the employees in several ways. The supervisor may try to find sources of money, may use his or her influence to get more information on several possibilities for the employee. In short: the supervisor may be able to realize things for the employee because he or she holds a higher-ranking position, because of which he or she has more power and more access to information. The exchangeable goods of the supervisor consist of these kinds of support for the employee.

When the supervisor turns out to be willing to use the influence that he or she has for specific wishes of the employee, the supervisor signals to trust the employee. Because the supervisor is not obliged to help the employee in such manner, the employee will estimate the exchange to be unbalanced. When this situation remains, the supervisor may consider terminating his or her help, causing the employee to lose valuable resources. The employee may, therefore, attempt to balance the exchange relationship by showing more co-operative behaviours and may, therefore, be more willing to work overtime. This argument leads to the following hypothesis:

Hypothesis 5: Employees who have been supported by their supervisors in the past, are more willing to work overtime.

The basis of this type of exchange relationship is reciprocity.² As well as the aforementioned past exchanges, future exchanges may affect employees' willingness to show co-operative behaviours. Assuming that employees do not only take past benefits into consideration but also future benefits, the employee would show co-operative behaviours when the expected future benefits are larger than the costs. When this employee expects the exchange relationship to be terminated soon, future benefits of helping the supervisor will be smaller than when the exchange relationship will last for a longer time since the supervisor has more opportunities to reward co-operative behaviours.

Hypothesis 6: Employees who expect to be working with their supervisor for a longer time are more willing to work overtime.

The time and energy spent by the employee participating in the training may turn out to be more productive when working with the supervisor with whom the exchange takes place than with another supervisor. We may, therefore, expect this employee to react stronger on the investment by showing more co-operative behaviours when he or she expects the co-operation to last longer than when he or she expects the co-operation with the supervisor to last shorter.

Hypothesis 7: The effect of the investment will be larger when the employees expect to co-operate with the supervisor for a longer time than when the employees expect to work with the supervisor for a shorter time.

In order to make sure that balanced exchange exists, the employee will also weigh past benefits when deciding whether to show co-operative behaviours or not. When the employee has been supported by both the supervisor and the employer, he or she will try to balance the exchange relationship by showing more co-operative behaviours than when investments were done by only one of the exchange partners.

Hypothesis 8: Employees who have positive past experiences with their supervisors, will react more positively to the investment than employees who have negative past experiences with their supervisor.

The second kind of personal exchange relationship that may affect willingness to work overtime is the one of the employee with the colleagues. The colleagues have the ability to reward or sanction the employee informally (Seashore, 1954). When the colleagues approve, they will give social approval when showing co-operative behaviours. When they do not approve, this may result in social sanctions such as exclusion. Therefore, we may expect the employee to work overtime when colleagues approve of that and it may be less likely that the employee works overtime when they disapprove.

Hypothesis 9: Employees whose colleagues approve of co-operative behaviours are more willing to work overtime.

Disapproval may be expressed by refusal to co-operate. When colleagues do not stay and work overtime, this may have two consequences for the employee. First, it may indicate social disapproval. Second, it means that the employee will have to do all the work by him or herself. For these reasons, the employee may consider the behaviour of the colleagues when deciding whether or not to work overtime.

Hypothesis 10: Employees whose colleagues are willing to work overtime, are more willing to work overtime as well.

Not only the focal employee is in an institutional social-exchange relationship with the employer; the other employees are also in such a relationship. The goods to be exchanged in those relationships are excludable. Therefore, the employees find themselves in a competitive situation because if one employee is promoted at a certain point in time, another will not be promoted. Therefore, the employee may not only want to show co-operative behaviours because his or her colleagues do, but also in order to make sure his or her promotion chances will not decrease.

Hypothesis 11: When working overtime is rewarded by bigger promotion chances, employees are more likely to work overtime when colleagues do so, than when co-operative behaviours are not rewarded by bigger promotion chances.

Method

Sample

The sample exists of 49 employees of a university, 266 employees of a government agency, ten employees of an ICT organization, 16 employees from an art funding foundation and 47 from a large bureaucratic organization. These 388 people rated 1,531 vignettes (see Table 1).

Table 1 Description of data

Organization	Number respondents	Number vignettes	Response (%)	Male–female
University	49	196	19	19–30
Government agency	266	1045	38	178–88
ICT organization	10	40	76	10–0
Art funding foundation	16	64	80	6–10
Bureaucratic organization	47	186	24	28–19
Total	388	1531		241–147

In the university, 18 respondents were support staff and 31 persons had an academic position, namely: 11 PhD-candidates, one post doc, ten assistant professors, six associate professors and three full professors.³ In the government agency, six respondents were higher-level managers, 21 were middle managers, 143 persons were policy makers and 96 were support staff or ‘other’ personnel. In the ICT organization, all respondents were male. Of the respondents in the ICT organization respondents, two worked at the higher-management level, two on the middle-management level and six at the lowest level. In the art funding foundation, one of the respondents worked at the highest management level of the organization, nine at the middle level and four at the lowest level. In the big bureaucratic organization, two respondents worked in high management, three in middle management, and 12 at the lowest hierarchical level.

The sample of organizations may seem somewhat mixed. However, the main interest of the study is to investigate if offering career-enhancing measures, such as training and promotion (possibilities), by employers encourage employees to work overtime, and this topic is relevant in all sorts of organizations. The employees of the organizations in the sample are for the larger part office workers. Therefore, the outcomes of this study may only be applicable to this kind of organizations.

Vignettes

The data used for this study were gathered using a vignette experiment or a ‘factorial survey design’ (Emerson *et al.*, 2001; Rooks *et al.*, 2000). ‘Vignettes are short descriptions of a person or a social situation which contains precise reference to what are thought to be the most important factors in decision-making or judgement-making processes of respondents’ (Alexander and Becker, 1978: 94). There are three reasons why vignettes are preferable over a regular survey of interviews. First, the respondent is less likely to let decisions be biased by impression management (social approval of the interviewer). Second, most people are not always aware of the considerations they make while making a decision. Using this method, they are forced to make these considerations consciously. Third, the systematic variation of the vignette variables enables the researcher to distinguish different combinations of the factors of the situation (Alexander and Becker, 1978).

A possible disadvantage of vignettes is that respondents base their decision partly on aspects they would not have considered if the problem had occurred in real life. An answer to this is that the vignette exists of several items that are randomly assigned and the respondent is likely to ignore irrelevant aspects. The chances that the respondent will only rate vignettes that deviate on aspects that do not matter in a real life situation, are very small.

A set of vignettes is introduced with a description of the situation. The description was as follows:

Half an hour before you planned to go home, you see that an important assignment, to be carried out by your department, is to be finished. The person first responsible for the assignment, is sick. You happen to know that your supervisor will come in early tomorrow morning to check up on the progress of the assignment and he/she will get into trouble if the assignment is not completed. Your supervisor is not in at the moment because of a meeting elsewhere and will not return today. Completing the assignment will take you 2 hours overtime. Following, there are several descriptions of situations. Please indicate for each of the situations how likely it is that you will stay to complete the assignment.⁴

Next, each respondent was given four vignettes and was asked to indicate on a scale of zero to ten how likely it was that they would stay and work overtime. We assume that the supervisor is the representative of the employers. The employee finds him-herself in a situation in which a task is not being executed, but it would be better for the supervisor when the task would be executed. If the supervisor would have been around, she would have given the assignment to one of the employees present. However, the supervisor will not be around to solve the problem in time. Therefore, the employee needs to consider giving up his or her own interests (going home on time) for the interests of the supervisor (the completed assignment), without being asked to do so.

In order to test the hypotheses, the following variables were systematically varied on the vignettes: first, the employer's investment in the employee was displayed. This investment could be either an expensive training or a recent promotion. In order to be able compare the outcomes, a third value was added which was formulated as follows: you have been working in this position for years and are not given the means to get training. Second, an item contained varied chances of future promotions after showing co-operative behaviours. Third, an item with varying financial compensation for overtime was on the vignettes. In half of the vignettes overtime was being compensated, in the other half it was not. This item was on the vignettes to control for direct rewards. This was done because it could be expected that the behaviour of employees is also affected by financial considerations.

Fourth, possible influences of colleagues were studied using two items: the first item contained the opinion of the colleagues (either approval or disapproval) and the second was about the behaviour of the colleagues: either none stayed to help, one stayed to help or five colleagues stayed to help and finish the assignment. Fifth, there was an item concerning the supervisor's support. The first value said that the supervisor had always been supportive concerning job-related wishes, the second that the supervisor had not. This item contains the goods to be exchanged by the supervisor. Purposely, it is formulated in a general manner because support can take many forms and there is a chance that the respondent will not be able to apply the description to his or her own situation when it is formulated more specifically. Last, the expected length of future co-operation was varied. This could either be long (both the employee and supervisor planned to work for a long time for the organization) or short (the supervisor was to leave the organization shortly).⁵

The number of unique vignettes that could be created by the items used is 288. This means that some item combinations are in the sample more than once. These vignettes are randomly distributed among the respondents. The sample of item combinations is drawn randomly with equal chances (without replacement) from the universe of all possible item combinations (Flache, 2003). To avoid the order of the items affecting the outcome (Emerson *et al.*, 2001), the order of the vignette items was randomly varied between the respondents.

A practical benefit of this measure is that this experiment can be used by researchers in various other organizations. In all kinds of organizations, working overtime may be needed in order to finish a task. A possible disadvantage of this way of measuring

co-operation is that the decision to work overtime affects the personal domain of employees. They are forced to weigh short-term costs against possible long-term benefits. Thus, the fact that working overtime affects the spare time of employees, and their obligations outside the work place, may be the cause that employees will not work overtime, regardless of the incentive structure in the workplace.

Analyses

The data have a hierarchical clustering structure: respondents each rated four vignettes. The rating of the vignettes will be affected not only by the items, but also by person-related characteristics. Because of this, there will be structural differences between the respondents' ratings. Multilevel analysis takes this nested structure explicitly into account (Snijders and Bosker, 1999). If these data were analysed using OLS-regression, this would result in unreliable standard deviations and hypothesis testing because the assumption of independent observation is violated (Van Duijn *et al.*, 1999). For this reason, the data are analysed with multilevel regression analysis. Three levels are distinguished in the analysis: the first level is the level of the vignettes, the second is the level of respondents and the third is the level of the organization.

Control variables

In order to control for other effects that might have an influence but are not included in the theoretical model, we included some standard control variables, such as gender. It could be argued that employees will take into consideration their domestic situation while deciding whether to work overtime or not. Therefore, we controlled for whether the respondent had a partner or a child. Higher jobs generally also come with more responsibility. Therefore, it could be that those employees who work at a higher level, are more inclined to work overtime. To control for this and similar effects, we controlled for educational level. Finally, we included a variable that measured whether the respondent found the vignette to be realistic or not. When a respondent frequently was confronted with such a situation in real life, he or she may be inclined to answer differently than when the respondent was not ever confronted with a similar situation.

Results

The correlations of the variables are displayed in Table 2.⁶

The strong correlations of 'investment by means of training' and 'investment by means of promotion' ($-.51$; $p < .01$) are caused because they are two dummies of the same variable (with reference category 'no investment'). We find a similar high correlation for the behaviour of colleagues ($-.53$; $p < .01$).⁷ The other correlations of the vignette items are weak; this is an indication that the sample is random.

Multilevel regression analysis

To test the hypotheses we did multilevel regression analyses. The variables were entered in five steps. First we estimated a null-model; then the control variables were entered. The third step consisted of adding the vignette variables and in the fourth step interaction variables to test Hypothesis 4 were added. And finally, in step five, the other interaction variables were added. Table 3 shows the results.

First, we will study the model fit with variance analysis by comparing the -2 log likelihood values. The variance of the intercept-only model or null-model is significant (2.91; s.e. = 0.26 for level 2 and 2.91; s.e. = 0.26 for level 1), which is an indication that

Table 2 *Correlations and descriptive statistics*

	<i>Mean.</i>	<i>S.e.</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>
1. Vignette score	7.63	2.36														
2. Female	0.38	0.49	-.06*													
3. Education	14.66	2.37	.02	-.15**												
4. Child	0.54	0.47	-.06*	-.22**	.02											
5. Partner	0.25	0.43	-.00	.16**	-.08**	-.38**										
6. Realistic	4.39	2.91	.35	-.01	-.15	-.02	.00									
7. Boss supportive	0.51	0.50	.17**	.02	-.02	.01	.01	.19**								
8. Informal reward	0.50	0.50	.14**	-.03	-.02	-.01	.01	-.11**	-.02							
9. Training	0.35	0.48	.05*	-.00	.02	-.00	.01	.03	.01	-.03						
10. Promotion	0.33	0.47	.08**	.01	-.02	-.01	.01	.10**	-.01	.02	-.51**					
11. Overtime paid	0.50	0.50	.05	-.02	.03	.05	-.06*	-.06	-.01	.01	.01	.03				
12. Chance promotion	0.50	0.50	.03	.02	-.02	.02	.00	.00	-.00	-.02	-.02	.00	.01			
13. 5 colleagues stay	0.34	0.48	.04	.00	-.02	.01	.03	.02	.02	.01	-.01	.01	.04	.04		
14. 1 colleague stays	0.34	0.48	.01	.02	-.00	-.01	-.03	.03	-.01	.01	.01	.03	-.04	-.02	-.53**	
15. Shadow future	0.50	0.50	.02	-.00	.02	.01	-.00	.03	-.04	-.02	.04	.01	.04	.03	-.03	-.03

Notes: N = 1,531; *p < .05. **p < .01. (2-tailed).

Table 3 Multilevel regression analysis to explain willingness to work overtime

	<i>B (s.e.)</i>	<i>B (s.e.)</i>	<i>B (s.e.)</i>	<i>B (s.e.)</i>	<i>H</i>
Female	−0.24 (0.20)	−0.23 (0.20)	−0.23 (0.20)	−0.23 (0.20)	
Education (years)	0.08 (0.04)*	0.07 (0.04)	0.05 (0.05)	0.06 (0.05)	
Child	−0.40 (0.22)*	−0.42 (0.21)*	−0.43 (0.21)*	−0.43 (0.22)*	
Partner	−0.16 (0.23)	−0.16 (0.23)	−0.17 (0.23)	−0.17 (0.23)	
Vignette realistic	0.33 (0.02)**	0.28 (0.02)**	0.28 (0.02)**	0.28 (0.02)**	
Investment					
none (ref)					
training		0.33 (0.10)**	0.33 (0.10)**	0.49 (0.17)**	1
promotion		0.30 (0.10)**	0.29 (0.10)**	0.51 (0.17)**	1.3
Bigger promotion chances		0.08 (0.08)	0.08 (0.08)	0.20 (0.14)	2
Overtime paid		0.34 (0.08)**	0.34 (0.08)**	0.34 (0.08)**	
Boss supportive		0.63 (0.08)**	0.63 (0.08)**	0.88 (0.14)**	5
Shadow future					
(1 = long)		0.04 (0.08)	0.04 (0.08)	0.06 (0.14)	6
Informal reward		0.39 (0.08)**	0.40 (0.08)**	0.40 (0.08)**	9
Colleagues					
none stays (ref)					
1 stays		0.18 (0.10)*	0.18 (0.10)*	0.34 (0.14)**	10
5 stay		0.30 (0.10)**	0.30 (0.10)**	0.31 (0.14)**	10
Years education* training			0.06 (0.04)	0.06 (0.04)	4
Years education* promotion			−0.01 (0.04)	−0.01 (0.19)	4
Future*promotion				0.05 (0.19)	7
Boss supportive* promotion				−0.48 (0.20)**	8
Future*training				−0.08 (0.19)	7
Boss supportive* training				−0.25 (0.20)	8
Promotion chances* 1 colleague				−0.32 (0.20)	11
Promotion chances*5 colleague stays				0.00 (0.19)	11
Constant	6.47 (0.25)**	6.33 (0.31)**	6.33 (0.31)**	6.15 (0.33)**	
Variance organization level	0.03 (0.05)	0.06 (0.08)	0.06 (0.08)	0.06 (0.08)	
Variance individual level	2.74 (0.24)**	2.72 (0.23)**	2.72 (0.23)**	2.70 (0.23)**	
Variance vignette level	2.05 (0.09)**	1.85 (0.08)**	1.85 (0.08)**	1.83 (0.08)**	
− 2 log likelihood	6153.62	6030.76	6027.36	6016.63	

Notes: N = 1,531; Null-model: − 2 LL = 6425.84; *p < .05; **p < .01.

random intercept analysis is necessary. However, the variance of the intercept-only model for the organization level (level 3), is not significant (0.17; s.e. = 0.16), indicating that the respondents from different organizations did not answer significantly different from each other. When we compare the fit of the null model with the model of the control variables, we find a significant improvement of the model ($\chi^2(10) = 272.22$, $p < 0.01$).

Adding the vignette variables also leads to a significantly increased fit of the model (compare models 1 and 2), ($\chi^2(9) = 122.86$; $p < 0.01$). Furthermore, we see that the variance at the level of the vignettes decreases from 2.05 to 1.85, meaning that 10 per cent of the variance can be explained by the vignette variables. The first set of interaction variables (to test Hypothesis 4) gives a moderate model improvement ($\chi^2(2) = 3.40$; $p = 0.18$) and when all interaction variables are entered we find a yet better fitting model ($\chi^2(6) = 10.73$; $p < 0.1$).

Considering the main effects of the control variables, the results in Table 3 show there is no difference between men and women concerning the willingness to work overtime in the described situations ($B = -0.23$; s.e. = 0.20). The variable used as indicator for position, (education) did not result in a significant effect. Having a partner ($B = -0.17$; s.e. = 0.23) did not affect the answers of the respondents. Respondents with children were less likely to answer that they would work overtime ($B = -0.43$; s.e. = 0.22).

Hypothesis 1, which predicted that the employee would be more willing to work overtime after the employer has invested, is supported by the data. When we only study the main effects in the third model (Table 3), we see that training ($B = 0.33$; s.e. = 0.10) positively affects the willingness to work overtime. For the hypothesis that predicted that when it is standard practice to reward extra effort with higher promotion chances, employees would be more willing to work overtime (Hypothesis 2), no support is found ($B = 0.08$; s.e. = 0.08). Hypothesis 3, stating that recent promotions had a positive effect on willingness to work overtime, is supported by the data ($B = 0.30$; s.e. = 0.10). This outcome is also in line with Hypothesis 1, in which it is assumed that promotion may be considered to be an investment. The reference category for these two dummies was 'You have been working for years on this position and are not given the chance to participate in training.' Based on these outcomes we could say that the two measures have a similar effect on willingness to work overtime, compared with the situation of no career prospects. Therefore, the two different career measures are beneficial for employees' willingness to work overtime. Hypothesis 4 is tested using two interaction effects added in Model 3 of Table 3. We do not find the expected negative effects, which would indicate that lower-educated people would react more positively on the investments than higher educated employees, ($B = 0.06$; s.e. = 0.04). Hypothesis 5 predicted that when a supervisor supported an employee, the employee would be more willing to work overtime. This hypothesis is also supported by the data ($B = 0.63$; s.e. = 0.08). The hypothesis about the expected future co-operation (Hypothesis 6), is not supported by the data ($B = 0.05$; s.e. = 0.08). Looking at the effects of investments and temporal embeddedness (Hypotheses 5 to 8), we only find an effect of the history. The effects of promotions are mainly affected by experiences with the supervisor in the past and not by the expected length of future co-operation. However, the interesting thing is that the effect is not in the predicted direction ($B = -0.48$; s.e. = 0.20), indicating that a positive past with the supervisor, combined with an investment results in less willingness to work overtime. The informal reward of colleagues (Hypothesis 9) turns out to affect willingness to work overtime. When the colleagues approve of helping the supervisor, the employee is more willing to work overtime ($B = 0.40$; s.e. = 0.08). Colleagues' behaviour also affects the willingness to work overtime (Hypothesis 10). When one colleague stays, the respondents are more willing to work overtime than when no one stays ($B = 0.18$; s.e. = 0.10), and when five colleagues stay, the willingness to work overtime increases

somewhat ($B = 0.30$; $s.e. = 0.14$). In Hypothesis 11 we predicted that employees were more likely to work overtime when their colleagues worked overtime in an organization where it is customary to reward extra effort by promotions. The last two interaction variables do not support that hypothesis.

Discussion and conclusions

In this paper it is argued that career-enhancing measures such as training and promotion (possibilities) may encourage employees to co-operate with their supervisor. More specifically, we addressed co-operation in terms of employees' willingness to work overtime. The hypotheses concerning specific HRM measures were supported by the data. The data were gathered using a vignette experiment. When an employer has invested in an employee, the employee will react with more co-operative behaviours. Employees react with co-operative behaviours only after they received their training or promotion. However, when it is customary in an organization to reward co-operative behaviours with, for instance promotions, this is not enough. Employees do not seem to anticipate the probable future promotion chances, but only react to investments already made by the employer. Therefore, they will only react after they have received a promotion or after they were given the opportunity for training. Employees do not seem to initiate a social exchange. This effect is explicitly found when we studied temporal embeddedness of the exchange relationship: when the employer's side was co-operative, the employee reacted with being co-operative. When the employer's side was not co-operative, the employee's willingness to co-operate was smaller. So also here, we find that employees are willing to be co-operative only after the employer has been co-operative, supporting the mutual-investment model.

The results of this paper indicate that organizations can positively affect co-operation problems with provision of career-enhancing measures. However, it is also shown that informal exchange relations are important factors for co-operation and these relationships may be more difficult to influence through formal control strategies. Concerning temporal embeddedness, we found that when the supervisor had been supportive in the past, this resulted in more willingness to work overtime.

We could say that when the supervisor and the employee had a past characterized by positive exchange, this positively affects co-operation. However, no effect was found when considering future expectations. Other researchers with similar hypotheses, had similar outcomes (e.g. Batenburg *et al.*, 2003; Buskens, 2002, esp. Ch. 5). The reason for not finding an effect may be because people do not consider the future and the theory therefore is wrong, or because of measurement problems (Buskens, 2002, esp. Ch. 5). In the case of this vignette experiment, the shadow of the future was small if the vignette said that the supervisor left. Even though this meant that the exchange relationship with the supervisor had a small shadow of the future, the other conditions still may have had their influences. Therefore in future research, this operationalization may be altered and rephrased in such a way that the employee will leave the organization shortly, which would mean that the shadow of the future of all aspects will be small. Another possible reason is that the theory needs to be adapted. Batenburg *et al.* (2003) suggest that the shadow of the past affects the shadow of the future. They find that when there exists a positive shadow of the past or a moderate shadow of the past, the future does not matter any more. In this vignette experiment, the past was either that the supervisor had been neutral or supportive. This could be interpreted as moderate or positive. Then, according to Batenburg *et al.*, one will find no effects. The other type of embeddedness, being

structural embeddedness, also had an important effect. The behaviour and approval of co-workers greatly affected the willingness to work overtime.

Organizational career rewards can be used to affect temporal embeddedness. Also here, we found indications that most effect will be found after a constructive past and not so much in a longer future. We found that when the employee had received rewards that benefited his or her career, the willingness to work overtime increased. At the same time, we found that future promotion chances had no effect. This outcome is similar to the outcomes of a positive history with the supervisor and no influence of a longer shadow of the future with the supervisor. Therefore, organizations can affect co-operation of her employees by providing for tangible career-enhancing rewards. We also believe to have found support for the argument that temporal and structural embeddedness positively affect co-operation.

This study can be improved if more HRM aspects are taken into account or formulated explicitly. For HRM policies to be effective, they need to be internally consistent (Baron and Kreps, 1999b). Since only a couple of measures were taken into account in this study, it may well be that we missed measures that increase or decrease the effectiveness of HRM policies. However, the factors that were expected to matter in advance were measured well, and we had a sample there with an ideal variation of these factors.

Another possible improvement could be the measurement of willingness to work overtime. We did not measure the actual behaviour of employees in the described situation, but only self-reported expected behaviour given the described conditions. However, since we are interested in the effects of different situations on behaviour, this does not need to disqualify the outcomes of this paper. We asked the respondents how they would act and, although this may cause an overestimation compared with actual behaviour, we expect that there is a high correlation between intended and actual behaviour, given the restrictions (Fishbein and Azjen, 1975).

One could wonder whether the respondents were able to imagine the situation well enough to answer the question in accordance with what they really would do. A possible downside of this vignette experiment may be that it had become too abstract, which caused the respondents to interpret the text in different ways. We do find that when respondents find the vignette more realistic, they indicate they are more willing to work overtime. This tendency could be caused because when people are more able to imagine the situation, they really are more likely to help. It could also be that they find the situation more realistic when they find themselves more often in a comparable situation. This may correspond with type of position the respondent holds or the type of organization.

We found support for a number of hypotheses deduced from the mutual-investment model. Investing in employees by means of training is returned by co-operative behaviours of employees. Employees may consider the investment to be more than an amount of money and are therefore willing to reciprocate the employer's signal of trust with non-enforceable, positive behaviour. The mutual investment-model explains this outcome best. Nevertheless, we also find an effect of financial compensation of overtime. So people are not only driven by social motivation, monetary incentives still work in the expected way.

We found important effects concerning personal exchange relationships in the organization. The employee considers the history of the co-operation in his or her decision whether to show co-operative behaviours or not. When the vignettes described a supervisor who has supported his or her employees, respondents were more willing to show co-operative behaviours. Besides the informal reward of colleagues, this is most influential. 'Being supportive' implies the supervisor being willing to consider employees' wishes and actually do something about them, or at least try to use her influence to meet with the wishes of the employee. The supervisor is not obliged to do this. The supervisor can choose to supervise his or her subordinates solely by formal

guidelines, without listening to subordinates' wishes. Thus, when the supervisor is supportive, he or she does something outside his or her job description and, in return, the subordinate is willing to take on tasks that fall outside his or her job description.

Contrary to our expectations, we found that when the organization invests in its employees and additionally the supervisor has been supportive, the willingness to show co-operative behaviours does not increase as much as the sum of the two main interventions. Here we find a diminishing marginal effect; even though the two interventions result in more co-operative behaviours than one, the increase is less than the sum of the effects of both interventions. Horgan (2003) found the same for Dutch companies that may be caused by the same 'overkill' effect. She found that individual HRM measures positively affected employee performance, but that when they were bundled into one policy, this effect disappeared. This could be caused by two reasons. The first reason is because there is a limit to the willingness to work overtime. In the experiment, we asked the respondents to answer on a scale. Employees may also have a maximum limit of willingness to work overtime: at one point they want to go home and relax regardless of any external incentive. It may be that beyond that point, additional external incentives lose their additional impact. The second possible reason is that employees have obligations elsewhere, such as caring responsibilities. Increasingly, employees have to combine work with caring responsibilities (Bond *et al.*, 1998; Kelloway *et al.*, 1999). Having children may affect different forms of co-operation in different ways. Sanders and Van Emmerik (2004) found that people with children co-operate more. However, they focused on co-operation within working hours. In this paper we found indications that having children had a negative effect on willingness to work overtime. These differences indicate that having children affects different kinds of co-operative behaviour in a different manner. When employees need to care for children, it is difficult for them to work overtime, even if they would want to. Because of this, incentives could have different effects for people with and people without caring responsibilities. The employer may take this into account, so that the employees can create opportunities to combine work and care, leaving the quality of work, including the option to work overtime if wanted by the employer, unaffected by family restrictions (Senge, 1990).

What practical implications do these outcomes have? Because employees only tend to react to the goods that they personally receive, it is not enough to provide opportunities and general policies enabling employees to get training when they think they need it. The employer needs to stimulate and enable every individual employee to do training before it will result in co-operative behaviours by the employees.

A second important finding was that co-workers strongly affect willingness to co-operate with the employer. Here, the employer faces a problem: to what extent is he or she able to affect the exchange relationships among employees? One thing that the supervisor needs to avoid is that he or she is disliked to the extent that his or her employees regard helping him or her as an act of betrayal to the group of employees.⁸ More research on this specific topic, using other methods than a vignette experiment, may be very useful.

Management style may be another point of concern (cf. Bass, 1985). When employees feel supported by their supervisor, this strongly affects their willingness to work overtime. Therefore, the supervisor needs to be able to support his or her employees and be given the choice on how to apply company rules. Then the supervisor is able to 'fix' a thing or two for his or her subordinates, causing the employees to be willing to do something extra. Strict enforcement of the rules may be counterproductive in this area (cf. Shadur *et al.*, 1999).

Finally, the employer needs to consider the relative added value of packages of measures. It was shown here that two measures are not as effective as the sum of the two separate measures. Therefore, the employer needs to think carefully what he or she wants

to achieve and develops policies that will result in the most effect. Simply implementing various measures than could have been beneficial when used one at a time, may prove to be inefficient when they are simultaneously implemented.

We believe that we have found support for the mutual-investment model: employees will try to balance the social exchange with the employer after having received something such as training or a promotion. However, two of the outcomes in this paper suggest that the mutual-investment model may need to be revised in certain points. First, it does not seem to be sufficient to signal in some way that effort will be rewarded in the future. This may be too vague a commitment from the organization for the employees to behave proactively. Only after the employer takes consideration of his or her employees' needs, will they react with more co-operative behaviours. Second, the mutual-investment model only takes into account the situation in the workplace. We saw that having one or more children had a negative effect on the willingness to work overtime and that two incentives were not twice as effective as one. This may be an indication that when an employee faces conflicting contexts, such as work and home, we need a broader theory to explain these outcomes. In such a theory, the spouse of the employee could be introduced as an actor, next to the employer and the employee. It can be expected that the demands made by the spouse and demands made by the employer do not always coincide. As a consequence, the employee faces different restrictions and may therefore behave differently than what one could expect, when only considering the conditions in the workplace. This would mean that the model would gain in predictive power when it is extended to the two exchange relationships that the employee has to balance: work and family.

Acknowledgement

This study is financed by the Dutch Organization for Scientific Research NWO (NWO/PBB9817).

Notes

1. Different training results in different increases and sorts of human capital (firm-specific or general). Assuming that in every training skills or knowledge are taught, the human capital of an employee will generally be larger after training.
2. Another type would be negotiated exchange (Molm *et al.*, 2000). Since the goods to be exchanged in this paper fall outside the formally agreed co-operative behaviours in an employment relationship, we deal with reciprocal exchange.
3. Total means and standard errors are displayed in Table 2.
4. An example of a vignette and all vignette items and their values are to be found in Appendix A.
5. See Appendix A for a literal representation of all vignette items and their values.
6. For the correlations, there is no correction for the nested structure. However, the values are low enough to assume that the deviation will be small (Snijders and Bosker, 1999).
7. These dummy variables were constructed from several values of one vignette item. For instance: on each different vignette one item was constructed in such a way that either zero, one or five colleagues stayed to help. This one item was translated into three dummy variables. So, all the vignettes contained one of these dummy variables. Therefore this high negative correlation is caused by the design.
8. See, for a nice example, Crozier (1964: 52–6).

References

- Adams, J.S. (1965) 'Inequity in Social Exchange'. In Berkowitz, L. (ed.) *Advances in Experimental Social Psychology*, vol. 2. New York: Academic Press, pp. 267–300.
- Akerlof, G.A. and Yellen, J.L. (1988) 'Fairness and Unemployment', *The American Economic Review*, 78(2): 44–9.
- Alexander, C.S. and Becker, H.J. (1978) 'The Use of Vignettes in Survey Research', *Public Opinion Quarterly*, 42(1): 93–104.
- Axelrod, R. (1984) *The Evolution of Cooperation*. New York: Basic Books.
- Baron, J.N. and Kreps, D.M. (1999a) 'Consistent Human Resource Practices', *California Management Review*, 41(3): 29–54.
- Baron, J.N. and Kreps, D.M. (1999b) *Strategic Human Resources. Framework for General Managers*. New York: Wiley and Sons.
- Baron, J.N. and Pfeffer, J. (1994) 'The Social Psychology of Organizations and Inequality', *Social Psychology Quarterly*, 57(3): 190–209.
- Bass, B.M. (1985) *Leadership and Performance Beyond Expectations*. New York: Free Press.
- Batenburg, R.S., Raub, W. and Snijders, C. (2003) 'Contacts and Contracts: Dyadic Embeddedness and the Contractual Behavior of Firms'. In Buskens, V., Raub, W. and Snijders, C. (eds) *The Governance of Relations in Markets and Organizations*. Oxford: Elsevier Science, pp. 135–88.
- Blau, P.M. (1964) *Exchange and Power in Social Life*. New York: John Wiley and Sons.
- Bond, J.T., Galinsky, E. and Swanberg, J.E. (1998) *The 1997 National Study of the Changing Workplace*. New York: Families and Work Institute.
- Boselie, P. and Dietz, G. (2003) 'Commonalities and Contradictions in Research on Human Resource Management and Performance'. paper presented at the Dutch HRM Network Conference 2003, Twente.
- Buskens, V. (2002) *Social Networks and Trust*. Boston, MA: Kluwer Academic Publishers.
- Crozier, M. (1964) *The Bureaucratic Phenomenon*. Chicago, IL: University of Chicago Press.
- Emerson, M.O., Yancey, G. and Chai, K.J. (2001) 'Does Race Matter in Residential Segregation? Exploring the Preferences of White Americans', *American Sociological Review*, 66: 922–35.
- Fehr, E. and Kirchsteiger, G. (1994) 'Insider Power, Wage Discrimination and Fairness', *The Economic Journal*, 104(424): 571–83.
- Fishbein, M. and Azjen, I. (1975) *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Flache, A. (2003) 'Je vrienden val je niet af (You don't let your friends down)', *Gedrag en Organisatie*, 16(3): 179–200.
- Homans, G.C. (1961) *Social Behavior: Its Elementary Forms*, 1974 edn. New York: Harcourt Brace Jovanovich.
- Horgan, J. (2003) *High Performance Human Resource Management in Ireland and the Netherlands: Adoption and Effectiveness*. Groningen: ICS-dissertation.
- Ito, J.K. and Brotheridge, C.M. (2005) 'Does Supporting Employees' Career Adaptability Lead to Commitment, Turnover, or Both?', *Human Resource Management*, 44(1): 5–19.
- Kelloway, E.K., Gottlieb, B.H. and Barham, L. (1999) 'The Source, Nature and Direction of Work and Family Conflict. A Longitudinal Investigation', *Journal of Occupational Health Psychology*, 4: 337–46.
- Koster, F. (2005) *For the Time Being: Accounting for Inconclusive Findings Concerning the Effects of Temporary Employment Relationships on Solidarity Behavior of Employees*. Veenendaal: Universal Press.
- Koster, F. and Sanders, K. (2006) 'Organizational Citizens or Co-operative Relationships? A Social Dilemma Approach to Solitary Behaviour of Employees', *Personnel Review*, 35(5): 519–37.
- Koster, F., Sanders, K. and Van Emmerik, I.H. (2003) 'Solidarity of Temporary Workers: The Effects of Temporal and Network Embeddedness on Solidarity Behaviors of PhD Students', *The Netherlands' Journal of Social Sciences*, 38: 65–80.

- Lindenberg, S. (1998) 'Solidarity: Its Microfoundation and Macrodpendence; A Framing Approach'. In Doreian, P.F. (ed.) *The Problem of Solidarity; Theories and Models*. Amsterdam: Gordon and Breach, pp. 61–112.
- Lindenberg, S. (2000) 'It Takes Both Trust and Lack of Mistrust: The Workings of Cooperation and Relational Signalling in Contractual Relationships', *Journal of Management and Governance*, 4: 11–33.
- Molm, L.D., Takahashi, N. and Peterson, G. (2000) 'Risk and Trust in Social Exchange: An Experimental Test of a Classical Proposition', *American Journal of Sociology*, 105(5): 1396–427.
- Mühlau, P. (2000) *The Governance of the Employment Relation*. Amsterdam: Thela Thesis.
- Podsakoff, P.M., MacKenzie, S.B., Paine, J.B. and Bachrach, D.G. (2000) 'Organizational Citizenship Behavior: A Critical Review of the Theoretical and Empirical Literature and Suggestions for Further Research', *Journal of Management*, 26(3): 513–63.
- Prendergast, C. (1999) 'The Provision of Incentives in Firms', *Journal of Economic Literature*, 37: 7–63.
- Raub, W. and Weesie, J. (2000) 'The Management of Durable Relations'. In Weesie, J. and Raub, W. (eds) *The Management of Durable Relations*. Amsterdam: Thela Thesis, pp. 1–32.
- Rooks, G., Raub, W., Selten, R. and Tazelaar, F. (2000) 'How Inter-Firm Co-Operation Depends on Social Embeddedness: A Vignette Study', *Acta Sociologica*, 43: 123–37.
- Rynes, S.L., Gerhart, B. and Minette, K.A. (2004) 'The Importance of Pay in Employee Motivation: Discrepancies between What People Say and What They Do', *Human Resource Management*, 43(4): 381–94.
- Sanders, K., Emans, B. and Koster, F. (2004) 'Determinanten van Solidair Gedrag binnen Modernen Organizationalities (Determinants of Solidarity Behaviours in Modern Organizations)', *Gedrag en Organizatie*, 17: 120–30.
- Sanders, K. and Van Emmerik, I.H. (2004) 'Does Modern Organization and Governance Threat Solidarity?', *Journal of Management and Governance*, 8(4): 351–72.
- Sanders, K., Van Emmerik, I.H. and Raub, W. (2002) 'Nieuwe vragen voor onderzoek binnen moderne organisaties (New questions for research in modern organizations)', *Gedrag en Organizatie*, 15(3): 184–201.
- Seashore, S.E. (1954) *Group Cohesiveness in the Industrial Work Group*. New York: Arno Press.
- Senge, P.M. (1990) *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Currency Doubleday.
- Shadur, M.A., Kienzie, R. and Rodwell, J.J. (1999) 'The Relationship between Organizational Climate and Employee Perceptions of Involvement: The Importance of Support', *Group and Organization Management*, 24(4): 479–503.
- Snijders, T. and Bosker, R. (1999) *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modelling*. London: Sage.
- Stouffer, S.A., Suchman, E.A., DeViney, L.C., Star, S.A. and Williams, Jr, R.M. (1949) *The American Soldier*. Princeton, NJ: Princeton University Press.
- Tsui, S.T., Pearce, J.L., Porter, L.W. and Tripoli, A.M. (1997) 'Alternative Approaches to the Employee-Organization Relationship: Does Investment in Employees Pay Off?', *Academy of Management Journal*, 40(5): 1089–121.
- Van Duijn, M.A.J., Van Busschbach, J.T. and Snijders, T.A.B. (1999) 'Multilevel Analysis of Personal Networks as Dependent Variables', *Social Networks*, 21: 187–209.
- Wickens, P.D. (1995) *The Ascendant Organization*. Basingstoke: Macmillan.
- Willer, D. (1992) 'Predicting Power in Exchange Networks: A Brief History and Introduction to the Issues', *Social Networks*, 14: 187–211.

Appendix A. Example vignette and vignette items

Situation 1											235
<ul style="list-style-type: none"> • Your supervisor has always supported you • You have recently been promoted to this position • When you work overtime some colleagues will consider you a show-off • None of your colleagues stay to help • Extra effort is usually taken into account in promotion decisions • The overtime will be paid for • Both you and your supervisor expect to work for a long time at this department 											
0	1	2	3	4	5	6	7	8	9	10	
I will certainly not stay				Neutral						I will certainly stay	

Vignette items

Past support supervisor:

- Your supervisor has always supported you
- Your supervisor has never supported you

Organizational investments in respondent:

- You recently participated in an expensive training sponsored by your organization
- You have recently been promoted to this position
- You have been working for years on this position and are not given the chance to participate in training

Informal reward:

- Your colleagues will appreciate you finishing the assignment
- When you work overtime some colleagues will consider you a show-off

Behaviour rest of department:

- Five colleagues stay to help
- One colleagues stays to help
- None of your colleagues stay to help
- Formal reward:

Long term:

- Extra effort is usually taken into account in promotion decisions
- Extra effort is not usually taken into account in promotion decisions

Short term:

- Overtime will be paid for
- Overtime will not be paid for

Estimation of the future:

- Both you and your supervisor expect to work for a long time at this department
- Your supervisor will soon leave the organization